

**Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services**

STATEMENT OF BASIS

**Utilities Plants
BASF Corporation – Geismar Site
Geismar, Ascension Parish, Louisiana
Agency Interest Number: 2049
Activity Number: PER20040012
Proposed Permit Number: 2039-V1**

I. APPLICANT

Company:

BASF Corporation
P.O. Box 457
Geismar, Louisiana 70734-0457

Facility:

Utilities Plants
BASF Corporation – Geismar Site
8404 River Road (Highway 75)
Geismar, Ascension Parish, Louisiana
Approximate UTM coordinates are 692.40 kilometers East and 3,341.45
kilometers North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS

BASF Corporation (BASF) operates a chemical manufacturing complex in Geismar, Ascension Parish, Louisiana (the Geismar Site). The Geismar Site has been divided into a number of operating areas for the purpose of obtaining Part 70 Operating Permits: the Chemical Intermediates–North/Diols Complex which includes 1,4-butanediol (1,4-BD), gamma-butyrolactone (GBL), n-methyl pyrrolidone (NMP), tetrahydrofuran (THF), and polytetrahydrofuran (Poly THF) plants; the Acetylene Plant; the Amine Plant; the Aniline I and II Plants; the EO/EG (ethylene oxide/ethylene glycol) Plant; the Glyoxal Plant; the MDI (methylenebis (phenylisocyanate)) 1 and 2 Plants; the PYR/NVP/PVP/PVP-I (vinylpyrrolidone/polyvinylpyrrolidone) Plants; the Polyol Plant; the Surfactants Plant; the TDI (toluene diisocyanate) Plant; and the Utilities Plant.

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The Utilities Plant currently operates under Part 70 Operating Permit No. 2265-V4 issued on November 22, 2000. This Part 70 operating permit addresses the air permitting requirements for the Utilities Plant only.

BASF Corporation - Geismar Site is a designated Part 70 source. Part 70 permits have been issued to all of the operating units within the Geismar Site. These include:

Permit No.	Unit or Source	Date Issued
2028-V3	Specialty Amines Complex	12/23/2005
2039-V0	NVP/PVP Plants	6/04/2008
2094-V1	Glyoxal Plant	7/13/2006
2265-V4	Utilities Plant	11/22/2000
2334-V0	MDI 1 Plant	6/05/2006
2353-V0	Diols/Intermediates Complex	2/20/2006
2427-V1	Polyol Plant and Chlorine/Caustic Unloading	7/07/2006
2459-V3	Ethylene Oxide/Ethylene Glycol Plant	3/30/2006
2526-V2	Acetylene Plant	6/19/2006
2558-V1	Aniline 1 and 2 Plants	10/18/2006
2559-V4	MDI 2 Plant	8/03/2007
2564-V2	Boilers No. 3 and No. 6	5/01/2007
2582-V2	Surfactants Plant	6/29/2005
2643-V1	TDI Plant	12/04/2007

In addition, the Geismar Site continues to operate under PSD Permit No. PSD-LA-523(M-1) issued on September 12, 1987 for the Cogeneration Unit No. 1 and PSD Permit No. PSD-LA-613 issued on December 30, 1997 for the Cogeneration Unit No. 2.

III. PROPOSED PROJECT/PERMIT INFORMATION

Application

BASF submitted a permit application and Emission Inventory Questionnaire (EIQ) for the Utilities Plant dated December 21, 2004, along with supplemental information dated June 13, 2005; November 29, 2005; September 5, 2007 (Addendum No. 1); December 11, 2006; February 29, 2008 (Addendum No. 2); March 28, 2008; April 9, 2008; June 17, 2008; and June 24, 2008, requesting a Part 70 operating permit renewal and minor modification.

Process Description

The Utilities Plant, consisting of several operating areas, provides steam, electricity, compressed air, and process water to the Geismar Site. The plant receives and then treats wastewater from various other production units prior to

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discharge. The Marine Shipping Facility (MSF) is no longer owned by BASF and is not included in the Utilities Plant permit.

The Utilities Plant provides electricity and steam to the entire BASF complex through a series of steam boilers and turbines. There are four boilers and two combined gas cycle turbines in the Utilities Plant.

Two boilers, Boilers No. 1 and No. 2, are covered in this permit. Utilities Boilers No. 3 and No. 6 are covered in a separate Part 70 Operating Permit. Boiler No. 1 is fired with natural gas, while Boiler No. 2 is fired with either natural gas or natural gas combined with acetylene offgas (AOG). The offgas consists primarily of hydrogen, carbon monoxide, and methane. In addition, both boilers have the capability to burn No. 2 and No. 6 Fuel Oil in the event that natural gas is unavailable or economically infeasible for use.

The two combined cycle turbines are used to generate electricity for the facility. One of the turbines, Cogeneration Unit No. 1 (Emission Point No. (EPN) UTL09), uses natural gas and drives a 35 MW electric generator. It has a heat recovery boiler that generates 153,000 lb/hr of steam. EPN UTL09 uses steam injection into the turbine as a method of NO_x control. The other cogeneration turbine, Cogeneration Unit No. 2 (EPN UTL10), has a heat recovery steam generator (HRSG). This turbine is capable of firing either natural gas and/or waste gas. The HRSG uses only natural gas. EPN UTL10 drives a 42 MW electric generator and uses both steam injection technology and SCR to control NO_x emissions from the turbine. A low-NO_x burner is used in the HRSG.

The Wastewater Treatment Plant (WWTP) is part of the Utilities Plant and consists of several operating areas. The WWTP treats wastewater from chemical production units throughout the entire BASF complex, as well as wastewater from adjacent facilities (IMTT, Air Products, and OxyChem). The WWTP is a biological, activated sludge, treatment process using above ground treatment equipment. The areas included in the WWTP are Primary Treatment, Offgas Treatment, Secondary Treatment, Sludge/Solids Handling, and Tertiary Treatment.

The Primary Treatment area consists of equipment to remove solids, adjust pH, and equalize wastewater from the Geismar Site production units. Normal process wastewater is filtered through basket strainers to remove solids that cannot be processed through the treatment plant. After filtering, the wastewater is pumped to the inlet surge tank, TK-225, for pH adjustment and partial removal of volatile components. The wastewater then gravity-flows to the equalization tank, TK-401. The off-specification/recycle and stormwater tanks, TK-210 and TK-211, respectively, allow storage of excess hydraulic load during heavy rains, diverted

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process streams during plant upsets and turnarounds, and streams with high toxic or high hydraulic loads. The tanks in this treatment area are fixed-roof tanks, and gases are collected and routed to offgas treatment.

A volatile organic compound (VOC) collection and treatment system is provided for offgas treatment. This system includes closed tanks with a vent collection system for the off-specification, stormwater, inlet surge, and equalization tanks. Emissions vented from these vessels are collected and routed to the Thermal Oxidizer TO-330 (EPN WWT03) which is designed to destroy hydrocarbons with at least a 98% efficiency. The Thermal Oxidizer also receives vents from other process areas for emissions destruction. The thermal oxidizer system includes an HCl scrubber—a packed column equipped with a mist eliminator that uses water as the scrubbing medium. The WWTP Enclosed Flare, EPN WWT17, is used as a backup control device when EPN WWT03 is not operating.

The Secondary Treatment area consists of equipment to react, biodegrade, and reduce organic contaminants in the wastewater stream. Normal wastewater flows from the primary treatment section through the equalization tank before being sent to the aerobic reactor system. This transition serves to dampen fluctuations in the composition of the influent to the aerobic reactor system and provides a uniform reactor feed. Addition of hydrochloric acid, HCl, via an in-line static mixer adjusts the pH of the wastewater to about 9.0 before it enters the bioreactors. The biological reaction then lowers the pH to approximately 7.5.

Wastewater gravity-flows from the equalization tank to the six bioreactors, R-410 A/B, R-460 A/B, and R-480 A/B. The bioreactors provide intimate contact of wastewater, oxygen, and biomass, allowing biodegradation of organic contaminants in the wastewater. Each reactor is sized at 750,000 gallons and provides a total hydraulic residence time of about 40 hours at 1260 gpm. The reactors are open-top tanks and oxygen injection is utilized for significantly higher efficiency of oxygen utilization. Other potential benefits of pure oxygen use are improved oxygen transfer efficiency, less sludge production, and better settling characteristics of the sludge.

The mixed liquor of biomass and wastewater gravity-flows from the reactors to the open top clarifiers, TK-420, TK-470, and TK-490 where the biomass settles and is concentrated to 1% in the underflow. The bottom sludge is largely recycled to the reactors, with a small portion of the excess sludge routed to sludge/solids handling. The clarified effluent is pumped to tertiary treatment. Each of the two clarifiers is 82 feet in diameter, providing an acceptable design overflow rate.

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The bio-sludge is dewatered using a belt press. Water removed from the sludge by the belt press is recycled to the bioreactors via a surge tank, TK-502. The dewatered sludge (12-18% solids) is then dried in the sludge drier, DR-530, prior to off-site disposal. The sludge drier is an indirect contact drier that utilizes 200 psig steam to produce a dried sludge (90% solids). Odor-causing compounds are removed by a packed column scrubber.

Clarified effluent from TK-420, TK-470, and TK-490 is filtered in two sets of sand filters, F-910 A/B/C/D, and F-950 A/B/C/D to reduce suspended solids content. Wastewater from the sand filters is collected in the filter clearwell and pumped to the carbon adsorption beds as needed.

The WWTP also includes a digester, a sooty water clarifier, and a plate and frame filter press.

Proposed Permit

In addition to this permit serving as a Part 70 Operating Permit renewal, BASF is proposing the following minor revisions to its current Part 70 Operating Permit:

1. To renumber all emission points with this permitting action;
2. To reconcile emissions to include minor fugitive emissions of carbon monoxide and ammonia;
3. To add an emissions cap, Wastewater Flare and Thermal Oxidizer Cap (Emission Point No. (EPN) WWT CAP01) to take into account periods where the Thermal Oxidizer (EPN WWT03) is out of service and the Wastewater Treatment Plant Flare (EPN WWT17) is in use as an alternative control device;
4. To update General Condition XVII emissions to allow for testing Boilers No. 1 and 2 (EPNs UTL01 and UTL02, respectively) once per year using No. 2 Fuel Oil;
5. To install aerators in the R-410B, R-460B, and R-480B Bioreactors (EPNs WWT07, WWT09, and WWT20, respectively);
6. To add OxyChem wastewater emissions and Polyol Plant wastewater emissions to the Wastewater Flare and Thermal Oxidizer Emissions Cap (EPN WWT CAP01);
7. To revise emissions estimates for the following emissions points: WWT03, WWT04, WWT08, WWT17, WWT19, and WWT CAP01;
8. To revise emissions from Boilers No. 1 and 2 and the Combined Cycle Gas Turbine No. 1 (EPN UTL09) to reflect proposed changes as a result of the approved NO_x RACT averaging plan;
9. To allow for an increase in the maximum permitted hourly NO_x emission rate for the Cogeneration Unit No. 2 (EPN UTL10) during start-ups;

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10. To delete the Marine Loading Dock (EPN WWT02) from this permit since BASF no longer owns/operates this loading facility;
11. To add an emissions cap, Diesel Firewater Pumps Cap (EPN WWT CAP02), and add additional firewater pumps and new descriptive names to the existing firewater pumps;
12. To revise emissions from the Sludge Dryer Contactor (EPN WWT05);
13. To update the Insignificant Activities and General Condition XVII Activities lists;
14. To incorporate minor revisions to the Part 70 Operating Permit to update various permit terms and conditions.

Permitted Air Emissions

Estimated emissions in tons per year for the Utilities Plant are as follows:

Pollutant	Before	After	Change
PM ₁₀	49.84	47.64	- 2.20
SO ₂	6.12	5.80	- 0.32
NO _x	2,109.14	1,259.75	- 849.39
CO	486.96	591.17	+ 104.21
VOC *	36.70	48.82	+ 12.12
SO ₃	0.00	0.06	+ 0.06

***VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):**

Pollutant	Before	After	Change
Acetaldehyde ¹	0.10	0.22	+ 0.12
Acrolein	0.00	0.03	+ 0.03
Aniline	< 0.01	0.09	+ 0.08
Benzene	0.92	0.84	- 0.08
1,3-butadiene	0.00	0.02	+ 0.02
n-Butyl Alcohol	< 0.01	0.58	+ 0.57
Carbon Tetrachloride	0.00	0.02	+ 0.02
Chlorobenzene	1.40	0.28	- 1.12
Chloroethane	0.00	0.14	+ 0.14
Chloroform	0.00	0.04	+ 0.04

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*VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):			
Pollutant	Before	After	Change
Dinitrotoluene	< 0.01	0.07	+ 0.06
1,1-Dichloroethene	0.00	0.03	+ 0.03
1,2-Dichloroethane	0.00	0.13	+ 0.13
Ethyl Benzene	0.36	0.46	+ 0.10
Ethylene Glycol	0.00	0.03	+ 0.03
Ethylene Oxide	0.00	0.03	+ 0.03
Formaldehyde	0.00	3.09	+ 3.09
n-Hexane	0.00	6.89	+ 6.89
Methanol	< 0.01	1.07	+ 1.06
Methyl Chloride	0.00	0.01	+ 0.01
Naphthalene	0.10	0.12	+ 0.02
Phenol	0.00	0.03	+ 0.03
Polynuclear Aromatic Hydrocarbons	0.00	0.12	+ 0.12
Propylene Oxide	0.00	1.11	+ 1.11
Styrene	0.50	2.30	+ 1.80
Toluene ¹	3.00	3.10	+ 0.10
ortho-Toluidine	< 0.01	0.05	+ 0.04
1,1,2-Trichloroethane	0.00	0.03	+ 0.03
Trichloroethylene	0.00	0.03	+ 0.03
Vinyl Chloride	0.00	0.14	+ 0.14
Xylene (mixed isomers) ¹	1.36	1.58	+ 0.22
Total	7.79	22.68	+ 14.89

¹ Highly Reactive Volatile Organic Compound (HRVOC)

Other VOC	26.14
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Non-VOC LAC 33:III.Chapter 51 Toxic Air Pollutants (TAPs):			
Pollutant	Before	After	Change
1,1,1-Trichloroethane	0.00	0.03	+ 0.03

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Non-VOC LAC 33:III.Chapter 51 Toxic Air Pollutants (TAPs):			
Pollutant	Before	After	Change
Ammonia	46.74	47.39	+ 0.65
Barium	0.00	0.01	+ 0.01
Chlorine	0.00	0.01	+ 0.01
Dichloromethane	0.00	0.01	+ 0.01
Hydrochloric Acid	4.61	6.78	+ 2.17
Tetrachloroethylene	0.00	0.01	+ 0.01
Zinc	0.00	0.04	+ 0.04
Total	51.35	54.28	+ 2.93

IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

Applicability and Exemptions of Selected Subject Items

TEMPO ID No:	Description	Requirement	Notes
EQT0310 EQT0311	UTL01 - No. 1 Boiler (B-1) UTL02 - No. 2 Boiler (B-2)	LAC 33:III.Chapter 22 Control of Emissions of Nitrogen Oxides (NO _x)	Demonstrate compliance with the facility-wide averaging plan using either the method in LAC 33:III.2201.E.1.c.i or the method in LAC 33:III.2201.E.1.c.ii. [LAC 33:III.2201.E.1.c]
		LAC 33:III.5109: Comprehensive Toxic Air Pollutant Emission Control Program - Emission Control and Reduction Requirements and Standards	EXEMPT. The combustion of Group 1 virgin fossil fuels is exempt from the requirements of Subchapter A. [LAC 33:III.5105.B.3.a]

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TEMPO ID No:	Description	Requirement	Notes
(continued)			
EQT0310	UTL01 - No. 1 Boiler (B-1)	40 CFR 60 Subpart D Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971	DOES NOT APPLY. Boilers were prior to August 17, 1971 and have not been reconstructed or modified since that time. [40 CFR 60.40(c)] Boilers were constructed in 1958.
EQT0311	UTL02 - No. 2 Boiler (B-2)	40 CFR 60 Subpart Da Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978	DOES NOT APPLY. Boilers were constructed prior to September 18, 1978 and have not been reconstructed or modified since that time. [40 CFR 60.40a(a)(2)] Boilers were constructed in 1958.
		40 CFR 60 Subpart Db Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	DOES NOT APPLY. Boilers were constructed prior to June 19, 1984 and have not been reconstructed or modified since that time. [40 CFR 60.40b(a)] Boilers were constructed in 1958.
		40 CFR 60 Subpart Dc Industrial-Commercial-Institutional Steam Generating Units	DOES NOT APPLY. Boilers were constructed prior to June 9, 1989 and have not been reconstructed or modified since that time. [40 CFR 60.40c(a)] Boilers were constructed in 1958.
EQT0317	UTL09 - Cogeneration Unit No. 1	LAC 33:III.509 Prevention of Significant Deterioration (PSD)	The Permittee shall comply with Permit No. PSD-LA-523(M-1). Steam injection technology shall be used to control NO _x emissions to 168 ppmv at 68 degrees Fahrenheit. Determined as BACT.

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TEMPO ID No:	Description	Requirement	Notes
(continued) EQT0317	UTL09 – Cogeneration Unit No. 1	LAC 33:III.Chapter 22 Control of Emissions of Nitrogen Oxides (NO _x)	Demonstrate compliance with the facility-wide averaging plan using either the method in LAC 33:III.2201.E.1.c.i or the method in LAC 33:III.2201.E.1.c.ii. [LAC 33:III.2201.E.1.c]
		LAC 33:III.5109 Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards	EXEMPT. The combustion of Group 1 virgin fossil fuels is exempt from the requirements of Subchapter A. [LAC 33:III.5105.B.3.a]
		40 CFR 60 Subpart GG Standards of Performance for Stationary Gas Turbines	The Permittee shall comply with 40 CFR 60.332 for NO _x and 40 CFR 60.333(b) for SO ₂ requirements.
		40 CFR 63 Subpart YYYY National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines	DOES NOT APPLY. Existing stationary combustion turbines in all subcategories do not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary for any existing stationary combustion turbine. [40 CFR 63.6090(b)(4)]
EQT0646	UTL10(a) – Cogeneration Unit No. 2 Gas Turbine	LAC 33:III.509 Prevention of Significant Deterioration (PSD)	The Permittee shall comply with Permit No. PSD-LA-613. Steam injection technology and selective catalyst reduction (SCR) shall be used to control NO _x emissions to less than or equal to 25 ppmv for waste gas containing 80% hydrogen and 8 ppmv for natural gas (except during startups or shutdowns). Determined as BACT.

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TEMPO ID No:	Description	Requirement	Notes
(continued) EQT0646	UTL10(a) – Cogeneration Unit No. 2 Gas Turbine	LAC 33:III.Chapter 22 Control of Emissions of Nitrogen Oxides (NO _x)	EXEMPT. Source meets more stringent requirement and is exempt from this Chapter. [LAC 33:III.2201.C.15]
		LAC 33:III.5109 Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards	EXEMPT. The combustion of Group 1 virgin fossil fuels is exempt from the requirements of Subchapter A. [LAC 33:III.5105.B.3.a]
		40 CFR 60 Subpart GG Standards of Performance for Stationary Gas Turbines	The Permittee shall comply with 40 CFR 60.332 for NO _x and 40 CFR 60.333(b) for SO ₂ requirements.
		40 CFR 63 Subpart YYYY National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines	DOES NOT APPLY. Existing stationary combustion turbines in all subcategories do not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary for any existing stationary combustion turbine. [40 CFR 63.6090(b)(4)]
EQT0647	UTL10(b) – Cogeneration Unit No. 2 Heat Recovery Steam Generator (HRSG)	LAC 33:III.509 Prevention of Significant Deterioration (PSD)	The Permittee shall comply with Permit No. PSD-LA-613. Low NO _x burners and selective catalyst reduction (SCR) shall be used to control NO _x emissions to less than or equal to 25 ppmv for waste gas containing 80% hydrogen and 8 ppmv for natural gas. Determined as BACT.
		LAC 33:III.Chapter 22 Control of Emissions of Nitrogen Oxides (NO _x)	EXEMPT. Source meets more stringent requirement and is exempt from this Chapter. [LAC 33:III.2201.C.15]

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TEMPO ID No:	Description	Requirement	Notes
(continued) EQT0647	UTL10(b) – Cogeneration Unit No. 2 Heat Recovery Steam Generator (HRSG)	LAC 33:III.5109 Comprehensive Toxic Air Pollutant Emission Control Program – Emission Control and Reduction Requirements and Standards	EXEMPT. The combustion of Group 1 virgin fossil fuels is exempt from the requirements of Subchapter A. [LAC 33:III.5105.B.3.a]
		40 CFR 60 Subpart Db Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	Nitrogen oxides ≤ 0.20 lb/MMBTU (43 ng/J) heat input expressed as NO ₂ , except as provided in 40 CFR 60.44b(k). The nitrogen oxide standards apply at all times, including periods of startup, shutdown, or malfunction. [40 CFR 60.44b]
		40 CFR 63 Subpart YYYY National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines	DOES NOT APPLY. Duct burners and waste heat recovery units are considered steam generating units and are not covered under this subpart per 40 CFR 63.6092.
EQT0325 EQT0338	WWT03 – Thermal Oxidizer T0-330 WWT17 – WWTP Enclosed Flare	LAC 33:III.2115 Control of Emissions of Organic Compounds – Waste Gas Disposal	DOES NOT APPLY. This Section does not apply to waste gas streams that are required by another federal or state regulation to implement controls that reduce VOC to a more stringent standard than would be required by this Section. [LAC 33:III.2115] Sources are subject to the requirements of 40 CFR 63 Subpart G (HON).

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TEMPO ID No:	Description	Requirement	Notes
(continued) EQT0325	WWT03 - Thermal Oxidizer T0-330	LAC 33:III.2153 Limiting VOC Emissions from Industrial Wastewater	EXEMPT. Any component of a wastewater storage, handling, transfer, or treatment facility that is subject to HON wastewater provisions or 40 CFR 61 Subpart FF or YYY is exempt from the provisions of this Section. [LAC 33:III.2153.G.6] Sources are subject to the requirements of HON.
EQT0338	WWT17 - WWTP Enclosed Flare	40 CFR 63 Subpart G National Emission Standards for Organic Hazardous Air Pollutants (HON) From the Synthetic Organic Chemical Manufacturing Industry (SOCMI)	

Prevention of Significant Deterioration/Nonattainment New Source Review

This permit is for renewal of the current Part 70 Operating Permit and involves minor revisions only. This permit does not include a major modification of existing sources or a physical change or change in the method of operation at the Utilities Plant. The emissions changes as shown in Section III above are due to reconciliations only. As a result, Non-Attainment New Source Review (NNSR) and Prevention of Significant Deterioration (PSD) requirements do not apply. Note: The large reduction in NO_x emissions is due to the implementation of the NO_x regulations from LAC 33:III.2201; the large increase in CO emissions is due to the change in emission factors used to calculate the CO emissions.

Streamlined Equipment Leak Monitoring Program

The Utilities Plant does not operate under a streamlined equipment leak monitoring program.

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Air Quality Analysis

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Air Quality Standard (NAAQS)
Emissions were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. The proposed project did not require the applicant to model emissions.			

Impact on air quality from emissions from the Utilities Plant is below the National Ambient Air Quality Standards (NAAQS) and the Louisiana Ambient Air Standards (AAS) beyond industrial property.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

BASF Corp. did not apply for a permit shield.

VI. PERIODIC MONITORING

Periodic monitoring is required for certain sources in this permit. All periodic monitoring shall be conducted in accordance with state and federal regulations, as applicable. See the Facility Specific Requirements of the draft Part 70 permit for monitoring requirements.

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VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H₂S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_x) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH₄), Ethane (C₂H₆), Carbon Disulfide (CS₂)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM₁₀ – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient

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Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO₂) – An oxide of sulfur.

Sulfuric Acid (H₂SO₄) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.